



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/587,970	04/27/2007	Olivier Fauqueux	294344US2X PCT	7116
22850 7590 09/16/2010 OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, L.L.P. 1940 DUKE STREET ALEXANDRIA, VA 22314			EXAMINER BEHNCKE, CHRISTINE M	
			ART UNIT 3661	PAPER NUMBER
			NOTIFICATION DATE 09/16/2010	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com
oblonpat@oblon.com
jgardner@oblon.com

Office Action Summary	Application No. 10/587,970	Applicant(s) FAUQUEUX ET AL.	
	Examiner CHRISTINE BEHNCKE	Art Unit 3661	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 August 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 11-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This office action is in response to the preliminary amendment filed August 24, 2006, in which claims 11-20 were presented for examination.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 11 and 16-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Endo, US 2002/0043423.

(Claim 11) Endo describes a method of assisting steering of steered wheels of a vehicle, comprising: applying a phase advance between a steering wheel and a rack element ([0005]) so as to decrease response time of the vehicle to an action of a driver of the vehicle on the steering wheel ([0040]).

(Claim 16) Endo describes a system for assisting steering of steered wheels of a vehicles comprising: means for applying a phase advance between a steering wheel and a rack element ([0040]).

(Claim 17) Endo further describes a sensor of parameters of rotation of the steering wheel ([0045]).

(Claim 18) Endo further describes wherein the means for applying a phase advance comprises a control unit receiving as an input, parameters of rotation of the

Art Unit: 3661

steering wheel ([0045]), and includes means of calculation for calculating a phase advance dependent on parameters of rotation of the steering wheel ([0040] and [0047]).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Art Unit: 3661

Claims 12-15 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Endo, in view of Kurishige, US 6,450,287.

(Claims 12 and 19) Endo teaches applying a phase advance but does not specify measuring or estimating the speed of rotation and angular acceleration of the steering wheel. However, Kurishige teaches an electric power steering controller wherein speed of rotation and angular acceleration of the steering wheel are measured or estimated and a steered wheels steering preset is emitted as a function of the speed of rotation and angular acceleration (column 10, lines 19-35 and column 15, lines 38-40).

(Claim 13) Kurishige further teaches wherein the speed of rotation and the angular acceleration of the steering wheel are compared with predetermined thresholds, a phase advance being applied in case of overshoot of the thresholds (column 18, lines 26-42).

(Claim 14) Kurishige further teaches wherein the steering preset is calculated based on an angle of steer of the steered wheels and a temporal advance (column 1, lines 15-45).

(Claim 15) Kurishige further teaches wherein the temporal advance is calculated based on an angle of the steering wheel (column 2, lines 15-36).

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Kurishige with the invention of Endo because as Kurishige suggests, it was well known to use the speed and acceleration of the steering shaft to determine the desired wheel angle of the vehicle to be compensated (column 10, lines 19-35).

Claim Rejections - 35 USC § 103

Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Endo in view of Kurishige as applied to claim 19 above, and further in view of Stout, US 2004/0064229.

Neither Endo nor Kurishige describe the use of fuzzy logic to formulate a confidence index to calculate the temporal advance as a function of angular parameters of the steering wheel. However, Stout teaches means for calculating a temporal advance as a function of angular parameters of the steering wheel ([0048]) comprises a fuzzy logic element for formulating a confidence index and a table for deducing a temporal advance from the confidence index ([0048] and [0036]). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Stout with the invention of Endo in view of Kurishige because as Stout suggests, using fuzzy logic to determine the confidence of the temporal advance allows the system to easily adapt to any suitable environment and adjust to different driving modes or other factors that may affect the steering of the vehicle ([0052]-[0053]).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHRISTINE BEHNCKE whose telephone number is (571) 272-8103. The examiner can normally be reached on 8:30 am - 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas G. Black can be reached on (571) 272-6956. The fax phone

Art Unit: 3661

number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

CMB

/Thomas G. Black/
Supervisory Patent Examiner, Art Unit 3661